

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/04641

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K7/06 C07K7/08 C07K14/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

CHEM ABS Data, BIOSIS, EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 03 54000 A (POLYPHOR & UNIVERSITÄT ZÜRICH) 3 July 2003 (2003-07-03) the whole document	1-39
X	S C SHANKARAMMA ET AL.: "Macrocyclic hairpin mimetics of the cationic antimicrobial peptide protegrin I: a new family of broad-spectrum antibiotics" CHEMBIOCHEM - A EUROPEAN JOURNAL OF CHEMICAL BIOLOGY., vol. 3, 2002, pages 1126-1133, XP002272157 WILEY VCH, WEINHEIM., DE ISSN: 1439-4227 the whole document	1-39
X	WO 02 70547 A (POLYPHOR & UNIVERSITÄT ZÜRICH) 12 September 2002 (2002-09-12) the whole document	1-39
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*&\* document member of the same patent family

Date of the actual completion of the international search

2 March 2004

Date of mailing of the international search report

18/03/2004

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01 16161 A (POLYPHOR) 8 March 2001 (2001-03-08) the whole document	1-39
X	H TAMAMURA ET AL.: "Certification of the critical importance of a L-3-(2-naphthyl)alanine at position 3 of a sepcific CXCR4 inhibitor, T140, leads to an exploratory performance of its downsizing study" BIOORGANIC & MEDICINAL CHEMISTRY., vol. 10, no. 5, May 2002 (2002-05), pages 1417-1426, XP002265745 ELSEVIER SCIENCE LTD., GB ISSN: 0968-0896 the whole document	1-39
X	J A ROBINSON : "The design, synthesis and conformation of some new beta-hairpin mimetics: novel reagents for drug and vaccine discovery" SYNLETT, vol. 4, 1999, pages 429-441, XP001080054 THIEME VERLAG, STUTTGART., DE ISSN: 0936-5214 the whole document	1-39
X	M FAVRE ET AL.: "Structural mimicry of canonical conformations in antibody hypervariable loops using cyclic peptides containing a heterochiral diproline template" JOURNAL OF THE AMERICAN CHEMICAL SOCIETY., vol. 121, no. 12, 31 March 1999 (1999-03-31), pages 2679-2685, XP002137023 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC., US ISSN: 0002-7863 the whole document	1-39
X	N FUIJI & H TAMAMURA: "Peptide-lead CXCR4 antagonists with anti-HIV activity" CURRENT OPINION IN INVESTIGATIONAL DRUGS., vol. 2, no. 9, 2001, pages 1198-1202, XP009019518 CURRENT DRUGS, LONDON., GB ISSN: 0967-8298 the whole document	1-39

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>H TAMAMURA ET AL.: "Development of specific CXCR4 inhibitors possessing high selectivity indexes as well as complete stability in serum based on an anti-HIV peptide T140 "</p> <p>BIOORGANIC &amp; MEDICINAL CHEMISTRY LETTERS, vol. 11, 2001, pages 1897-1902, XP002265743</p> <p>OXFORD, GB</p> <p>ISSN: 0960-894X</p> <p>the whole document</p>	1-39
X	<p>H TAMAMURA ET AL.: "Conformational study of a highly specific CXCR4 inhibitor, T140, disclosing the close proximity of its intrinsic pharmacophores associated with strong anti-HIV activity "</p> <p>BIOORGANIC &amp; MEDICINAL CHEMISTRY LETTERS, vol. 11, 2001, pages 359-362, XP002265744</p> <p>OXFORD, GB</p> <p>ISSN: 0960-894X</p> <p>the whole document</p>	1-39
X	<p>L JIANG ET AL.: "Combinatorial biomimetic chemistry: parallel synthesis of a small library of beta-hairpin mimetics based on loop III from human platelet-derived growth factor B "</p> <p>HELVETICA CHIMICA ACTA., vol. 83, 2000, pages 30097-3112, XP002202283</p> <p>VERLAG HELVETICA CHIMICA ACTA. BASEL., CH</p> <p>ISSN: 0018-019X</p> <p>the whole document</p>	1-39
X	<p>D OBRECHT ET AL.: "Novel peptidemimetic building blocks and strategies for efficient lead finding "</p> <p>ADVANCES IN MEDICINAL CHEMISTRY, vol. 4, 1999, pages 1-68, XP002137026</p> <p>JAI PRESS., US</p> <p>the whole document</p>	1-39
X	<p>S HANESSIAN ET AL.: "Design and synthesis of conformationally constrained amino acids as versatile scaffolds and peptide mimetics"</p> <p>TETRAHEDRON., vol. 53, no. 38, 1997, pages 12789-12854, XP004106190</p> <p>ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM., NL</p> <p>ISSN: 0040-4020</p> <p>the whole document</p>	1-39

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# INTERNATIONAL SEARCH REPORT

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>K SATO ET AL.: "Solid phase synthesis of human growth hormone-releasing factor analogs containing a bicyclic beta-turn dipeptide"</p> <p>INTERNATIONAL JOURNAL OF PEPTIDE AND PROTEIN RESEARCH.,</p> <p>vol. 38, no. 4, April 1991 (1991-04),</p> <p>pages 340-345, XP000229209</p> <p>MUNKSGAARD, COPENHAGEN., DK</p> <p>ISSN: 0367-8377</p> <p>the whole document</p> <p>_____</p>	1-39

# INTERNATIONAL SEARCH REPORT

International application No.  
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## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 1-17, 29-39  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1-17, 29-39

Present claims 1-17 and 29-39 relate to an extremely large number of possible compounds and methods to prepare and use them. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compounds and methods claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts relating to the compounds as listed in claims 18-28 and methods based on them. Moreover, all real examples not specifically claimed have been searched.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0354000	A	03-07-2003	WO 03054000 A1	03-07-2003
WO 0270547	A	12-09-2002	CA 2439178 A1	12-09-2002
			WO 02070547 A1	12-09-2002
			EP 1363934 A1	26-11-2003
WO 0116161	A	08-03-2001	WO 0116161 A1	08-03-2001
			AU 5856699 A	26-03-2001
			BR 9917475 A	14-05-2002
			CA 2382931 A1	08-03-2001
			EP 1214336 A1	19-06-2002